

IP 67 passive splitter boxes

Telefast®, ABE9 splitter boxes

Presentation

ABE9 passive splitter boxes for M12 connectors make it possible to eliminate long and difficult cabling operations. Due to their modularity and their dimensions, they are the ideal solution for a wide variety of customer applications.

Connection to the processing unit can either be made by connector or by multicore cable of different lengths.

IP 67 protection allows these products to be used within processes or machines in harsh environments (splashing water, oil, dust, etc.).

The splitter boxes, available in 4 or 8 channel versions, allow connection of up to 16 signals maximum, depending on the version (2 per channel).

The characteristics of splitter boxes ABE 9C12 are as follows:

- Connection of sensors and actuators using M12, 5-pin connectors.

- Modularity: 4 or 8 channels.

- Fixing system and connection to the processing unit conforming to market standards:

- fixing centres,

- M23, 19-pin connector, enabling the use of pre-formed cables in order to reduce installation time and the risk of error,

- multicore cable, 5 or 10 metres long. The splitter box comprises a connection cover fitted with plug-in terminals, which provides considerable flexibility for:

- the replacement of damaged parts,

- modification of cable length.

Base units ABE 9C12●●L●● enable the use of 2 separate commons which, for example, can be used for the management of an emergency stop. This function is accessible beneath the terminal cover using 2 removable links. If both links are removed, the 2 supplies become independent.

The use of a Y-connector allows 2 signals to be connected to the same M12 channel on the splitter box.

Example: splitter box ABE 9C1281 (8 channels) enables the connection of 16 signals to the processing unit.

The Y-connector is available in 2 versions:

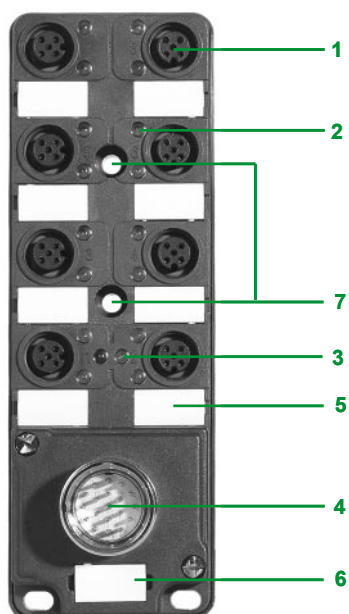
- M12-M12 for connection of two M12 connectors to a single M12 channel on the splitter box,

- M8-M12 for connection of two M8 connectors to a single M12 channel on the splitter box.

Complete reference	= Splitter box only	+ Connector with cable
ABE 9C1240L05	= ABE 9C1240M	+ ABE 9XCA1405
ABE 9C1240L10	= ABE 9C1240M	+ ABE 9XCA1410
ABE 9C1241L05	= ABE 9C1241M	+ ABE 9XCA1405
ABE 9C1241L10	= ABE 9C1241M	+ ABE 9XCA1410
ABE 9C1280L05	= ABE 9C1280M	+ ABE 9XCA1805
ABE 9C1280L10	= ABE 9C1280M	+ ABE 9XCA1810
ABE 9C1281L05	= ABE 9C1281M	+ ABE 9XCA1805
ABE 9C1281L10	= ABE 9C1281M	+ ABE 9XCA1810

Connector only

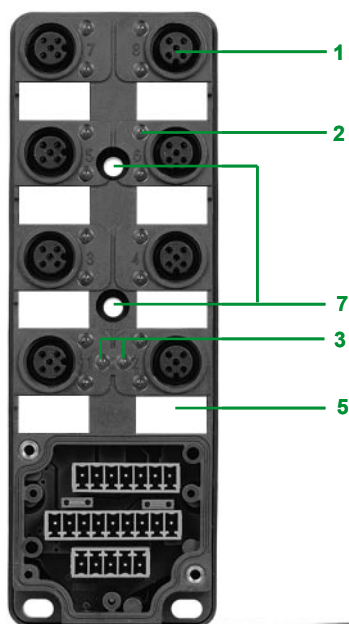
ABE 9CM12C



Description

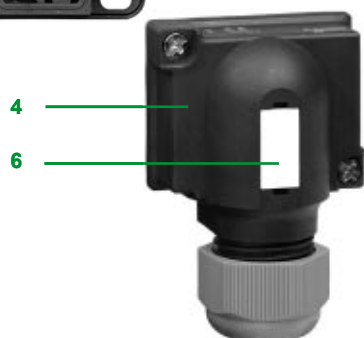
Passive splitter boxes ABE 9C12...C23 have the following on the front face:

- 1 Four or eight M12 female connectors (depending on model) for connection of sensors and actuators (2 channels per connector).
- 2 Eight or sixteen channel status indicator lights (depending on model).
- 3 One "Power on" indicator light on the splitter box (depending on model).
- 4 One M23, 19-pin male connector.
- 5 Four or eight channel marker labels.
- 6 One splitter box marker label.
- 7 Splitter box fixing holes.



Passive splitter boxes ABE 9C12...L... have the following on the front face:

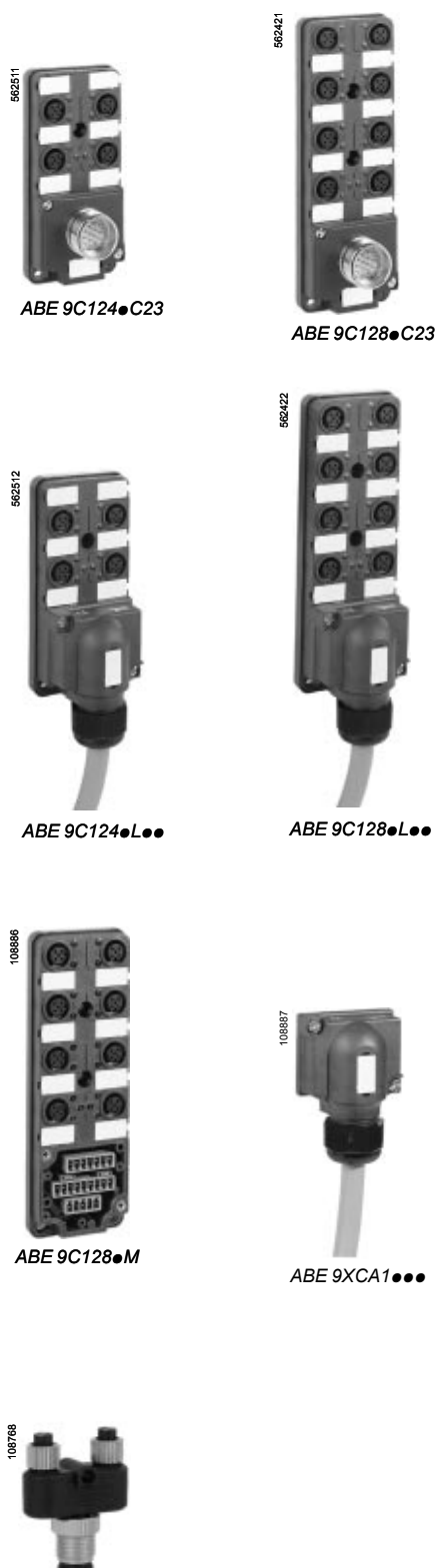
- 1 Four or eight M12 female connectors (depending on model) for connection of sensors and actuators (2 channels per connector).
- 2 Eight or sixteen channel status indicator lights (depending on model).
- 3 Two "Power on" indicator lights on the splitter box (depending on model).
- 4 One removable connection cover fitted with plug-in terminals.
- 5 Four or eight channel marker labels.
- 6 One splitter box marker label.
- 7 Splitter box fixing holes.



Splitter box type			ABE 9C12●0C23	ABE 9C12●1C23	ABE 9C12●0L●●, ABE 9C12●0M	ABE 9C12●1L●●, ABE 9C12●1M
Environmental characteristics						
Product certifications			cULus			
Temperature	Operation	°C	- 20...+ 80			
	Storage	°C	- 40...+ 85			
Degree of protection	Conforming to IEC 529		IP 67			
Vibration resistance	Conforming to IEC 68-2-6, test Fc	Hz	10 ≤ f ≤ 57 (constant amplitude = 1.5 mm) 57 ≤ f ≤ 150 (constant acceleration = 0.20 gn)			
Shock resistance	Conforming to IEC/EN 68-2-2		30 gn, for 11 ms			
Insulation group	VDE 0110		Category 3			
Mounting			All positions			
Mechanical fixing			M4 screw fixing			
Channel characteristics						
Number of channels			4 or 8 (depending on model)			
Type of connection per channel			M12, 5-pin female connectors			
Nominal voltage		 V	24			
Current per channel		A	4 maximum			
Contact resistance		mΩ	5			
Power supply status indication			–	Green LED	–	Green LED
Channel status indication			–	Yellow LED	–	Yellow LED
Connection characteristics						
Type of connection			M23, 19-pin male connector		Multicore cable	
Total current in commons	1 mm² supply wire	A	16			
	0.75 mm² supply wire	A	12			
Separation of commons			Without		Without or with (by removing links BR1 and BR2, see connections on page 14502/7)	

Substitution table

Previous range	New range
Splitter boxes with connection by M23 connector	
XZ LC1241C3	ABE 9C1241C23
XZ LC1240C3	ABE 9C1240C23
XZ LC1281C3	ABE 9C1281C23
XZ LC1280C3	ABE 9C1280C23
Splitter boxes with connection by cable	
XZ LC1241L5	ABE 9C1241L05
XZ LC1240L5	ABE 9C1240L05
XZ LC1241L10	ABE 9C1241L10
XZ LC1240L10	ABE 9C1240L10
XZ LC1281L5	ABE 9C1281L05
XZ LC1280L5	ABE 9C1280L05
XZ LC1281L10	ABE 9C1281L10
XZ LC1280L10	ABE 9C1280L10
Accessories	
XZ LG102	FTX CM12B
XZ LC1220C1	FTX CY1212



References

Splitter boxes with connection by M23 connector

Number of channels	Connection by	LED indicator	Reference	Weight kg
4	4 x M12 female connectors	With	ABE 9C1241C23	0.080
		Without	ABE 9C1240C23	0.080
8	8 x M12 female connectors	With	ABE 9C1281C23	0.140
		Without	ABE 9C1280C23	0.140

Splitter boxes with connection by cable

Number of channels	Connection by	Length m	LED indicator	Reference	Weight kg
4	4 x M12 female connectors	5	With	ABE 9C1241L05	0.680
			Without	ABE 9C1240L05	0.680
		10	With	ABE 9C1241L10	1.700
			Without	ABE 9C1240L10	1.700
8	8 x M12 female connectors	5	With	ABE 9C1281L05	1.610
			Without	ABE 9C1280L05	1.610
		10	With	ABE 9C1281L10	3.060
			Without	ABE 9C1280L10	3.060

Splitter boxes only, M12

Number of channels	For use with connector terminal	with cable	LED indicator	Reference	Weight kg
4	ABE 9CM12C	ABE 9XCA14●●	With	ABE 9C1241M	0.060
			Without	ABE 9C1240M	0.060
8	ABE 9CM12C	ABE 9XCA18●●	With	ABE 9C1281M	0.100
			Without	ABE 9C1280M	0.100

Separate components

Type	No. of channels	For use with splitter box	Length m	Reference	Weight kg
Terminal block connector (1)	—	ABE 9C124●M ABE 9C128●M	—	ABE 9CM12C	0.040
Connectors with cable	4	ABE 9C124●M	5	ABE 9XCA1405	1.060
			10	ABE 9XCA1410	2.080
	8	ABE 9C128●M	5	ABE 9XCA1805	1.510
			10	ABE 9XCA1810	2.240

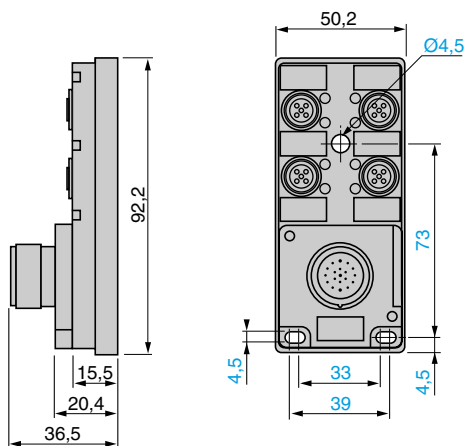
Accessories

Description	Composition	Reference	Weight kg
Sealing plugs	For M8 connector (lot of 10)	FTX CM08B	0.100
	For M12 connector (lot of 10)	FTX CM12B	0.100
Y-connectors	Connection of 2 x M8 connectors to M12 connector on splitter box	FTX CY1208	0.020
	Connection of 2 x M12 connectors to M12 connector on splitter box	FTX CY1212	0.030
Marker labels	Lot of 12	ABE 9XLA10	—

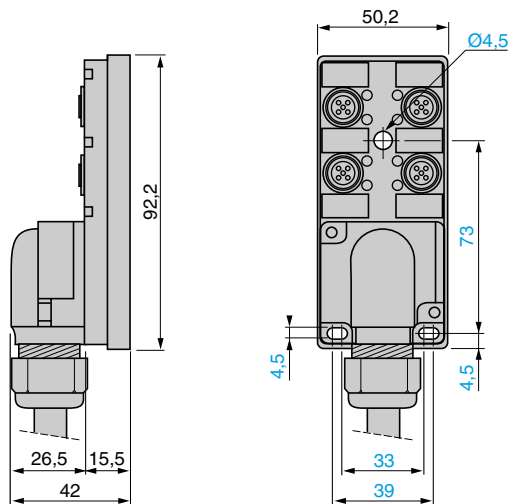
(1) To be cabled by user.

Dimensions

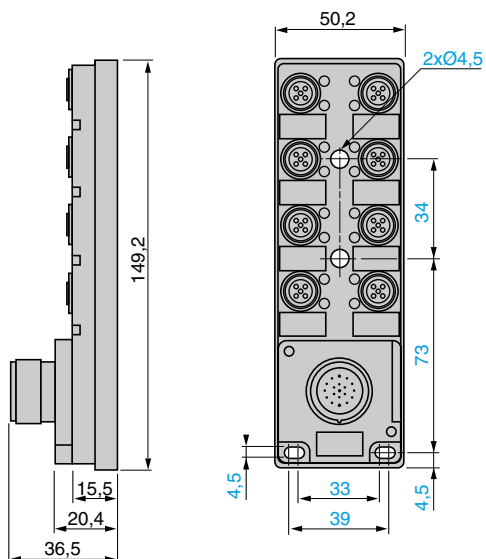
ABE 9C124●C23



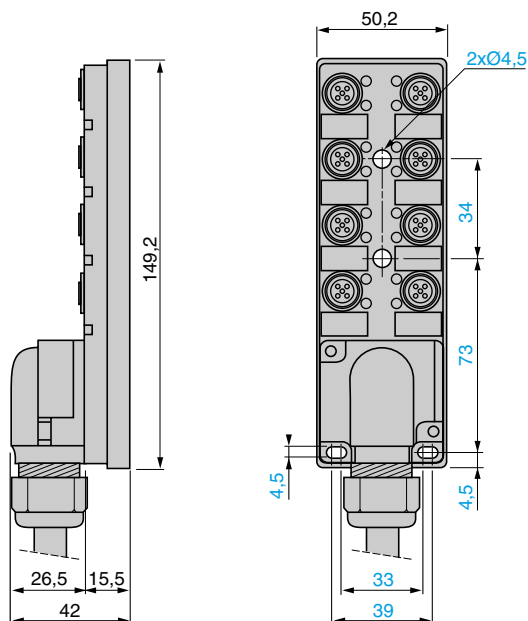
ABE 9C124●L●●



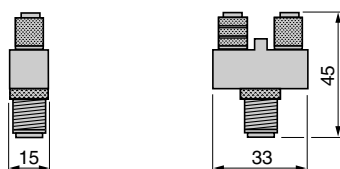
ABE 9C128●C23



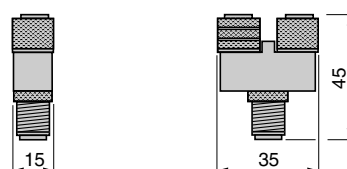
ABE 9C128●L●●



FTX CY1208

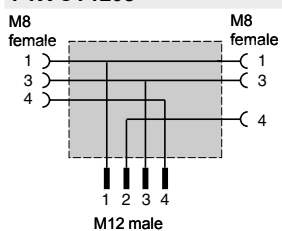


FTX CY1212

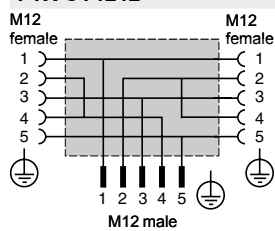


Y-connector connection

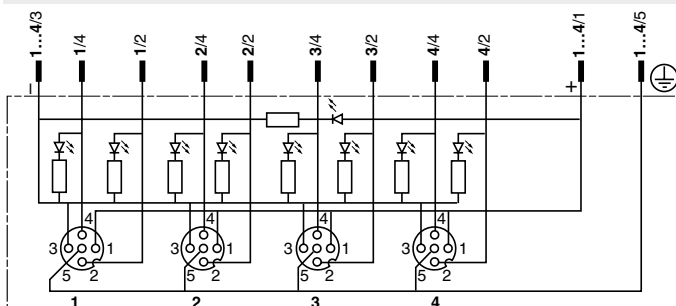
FTX CY1208



FTX CY1212

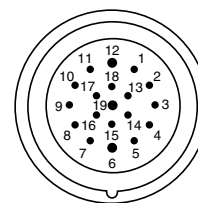


ABE 9C124●C23



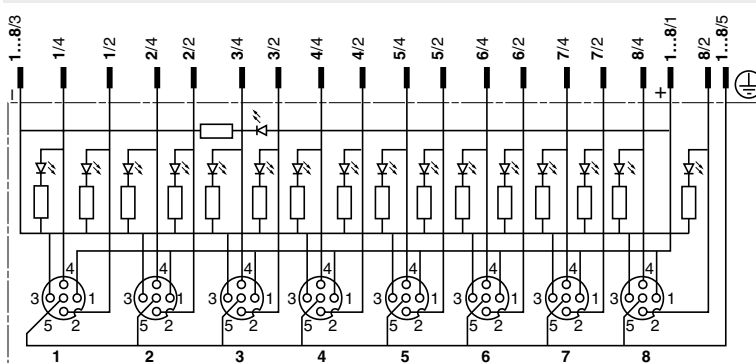
Item	Contact
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1/4	15
1/2	7
2/4	5
2/2	4
3/4	16
3/2	8
4/4	3
4/2	14
1 and 3/1	19
2 and 4/1	19
1 and 3/3	6
2 and 4/3	6
1...4/5	12



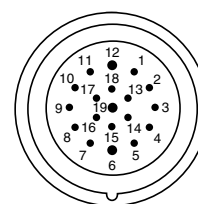
M23 connector

ABE 9C128●C23



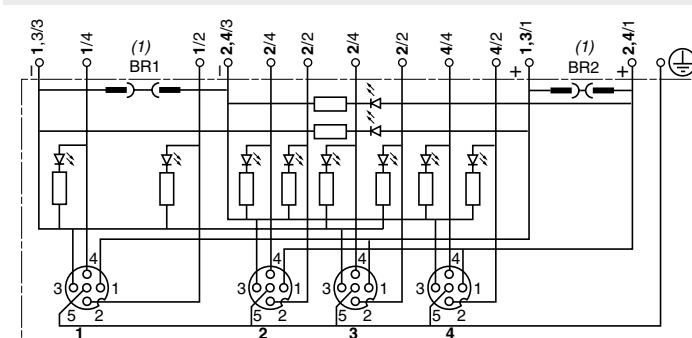
Item	Contact
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1/4	15
1/2	7
2/4	5
2/2	4
3/4	16
3/2	8
4/4	3
4/2	14
5/4	17
5/2	9
6/4	2
6/2	13
7/4	11
7/2	10
8/4	1
8/2	18
1, 3, 5 & 7/1	19
2, 4, 6 & 8/1	19
1, 3, 5 & 7/3	6
2, 4, 6 & 8/3	6
1...8/5	12



M23 connector

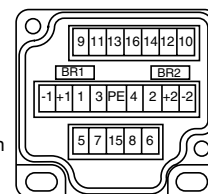
ABE 9C124●L●●



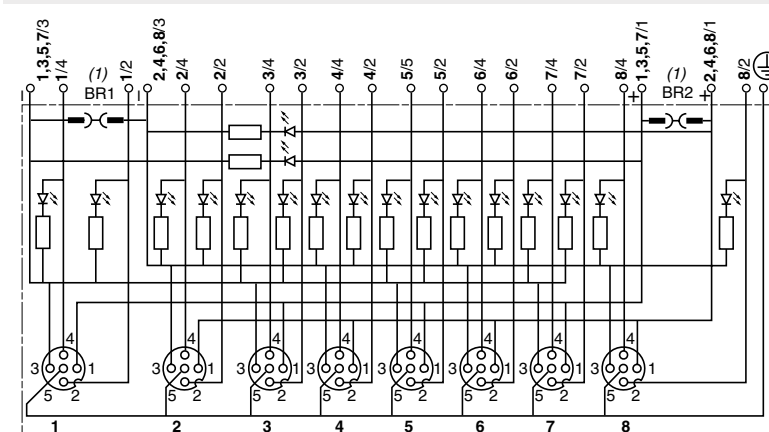
(1) BR1 and BR2: removable link.

Item	Term.	Wire
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1/4	1	White
1/2	9	Grey/pink
2/4	2	Green
2/2	10	Red/blue
3/4	3	Yellow
3/2	11	White/green
4/4	4	Grey
4/2	12	Brown/green
1 and 3/1	+1	Brown 1
2 and 4/1	+2	Brown 2
1 and 3/3	-1	Blue 1
2 and 4/3	-2	Blue 2
1...4/5	PE	Green/yellow



ABE 9C128●L●●



(1) BR1 and BR2: removable link.

Item	Term.	Wire
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1/4	1	White
1/2	9	Grey/pink
2/4	2	Green
2/2	10	Red/blue
3/4	3	Yellow
3/2	11	White/green
4/4	4	Grey
4/2	12	Brown/green
5/4	5	Pink
5/2	13	White/yellow
6/4	6	Red
6/2	14	Yellow/brown
7/4	7	Black
7/2	15	White/grey
8/4	8	Violet
8/2	16	Grey/brown
1, 3, 5 & 7/1	+1	Brown 1
2, 4, 6 & 8/1	+2	Brown 2
1, 3, 5 & 7/3	-1	Blue 1
2, 4, 6 & 8/3	-2	Blue 2
1...8/5	PE	Green/yellow

